

# PROJECT CAPTURE: USING FOREST INVENTORY AND ANALYSIS DATA TO PRIORITIZE TREE SPECIES FOR CONSERVATION, MANAGEMENT, AND RESTORATION

---

Kevin M. Potter<sup>1</sup>, Barbara S. Crane<sup>2</sup>, William W. Hargrove<sup>3</sup>

---

**Abstract**—A variety of threats, most importantly climate change and insect and disease infestation, will increase the likelihood that forest tree species could experience population-level extirpation or species-level extinction during the next century. Project CAPTURE (Conservation Assessment and Prioritization of Forest Trees Under Risk of Extirpation) is a cooperative effort across the three Forest Service deputy areas to establish a framework for conservation priority-setting assessments of forest tree species across the entire United States. Forest Inventory and Analysis (FIA) data represent an unmatched resource for conducting broad-scale, spatially explicit assessments of the risk posed by climate change and other threats to the genetic integrity of forest tree populations and species. Project CAPTURE uses FIA data, along with life history trait and pest and pathogen threat information from other sources, to categorize and prioritize nearly 400 tree species for conservation, monitoring, management and restoration across all forested lands in the contiguous United States and Alaska. Specifically, we used FIA data to (1) generate 4-km<sup>2</sup> resolution maps predicting the genetic pressure that could be imposed by climate change on forest tree species and to (2) compile information about the biological attributes and genetic diversity of individual species. This assessment tool should be valuable for scientists and managers attempting to determine which species and populations to target for monitoring efforts and for pro-active gene conservation and management activities.

---

---

<sup>1</sup>Kevin M. Potter, Research Associate Professor, Department of Forestry and Environmental Resources, North Carolina State University, Research Triangle Park, NC; (919) 549-4071  
kpotter@ncsu.edu

<sup>2</sup>Barbara S. Crane, Regional Forester, USDA Forest Service, Southern Region, National Forest System, Atlanta, GA; (404) 347-4039, barbaracrane@fs.fed.us

<sup>3</sup>William W. Hargrove, Research Ecologist, USDA Forest Service, Southern Research Station, Eastern Forest Environmental Threat Assessment Center, Asheville; (828) 257-4846, whargrove@fs.fed.us